

# EXHIBIT A

## INVENTION DISCLOSURE 009536

This form is to be used for disclosure to The Boeing Company of inventions, discoveries, improvements or innovations, whether or not considered patentable. See above for instructions.

## A Portable Computing Visual Security System

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B BOEING EMPLOYEE (ADD SUBSIDIARY)  Commercial Airplanes Military Aircraft and Missiles Phantom Works Shared Services Group Space and Communications  CONTRACT EMPLOYEE  <input checked="" type="checkbox"/> X OTHER (SPECIFY) Connexion By Boeing		BOEING EMPLOYEE (ADD SUBSIDIARY)  Commercial Airplanes Military Aircraft and Missiles Phantom Works Shared Services Group Space and Communications  CONTRACT EMPLOYEE  <input checked="" type="checkbox"/> X OTHER (SPECIFY) Connexion by Boeing	
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## C STATE OF DEVELOPMENT (See Remarks On Back)

DATE CONCEIVED C [REDACTED]	CONCEPT ONLY <input checked="" type="checkbox"/> X PROVEN ANALYTICALLY DESIGN COMPLETE	DATE BUILT	DATE SATISFACTORILY TESTED	PROTOTYPE <input checked="" type="checkbox"/> IN PRODUCTION _____ DATE
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## D APPLICATION OF THE INVENTION

PRODUCT/PROGRAM D Connexion by Boeing	PRODUCTION RELEASE E.G. PRR NO.	DATE
POTENTIAL CUSTOMER(S) IN ADDITION TO BOEING	Airlines hosting the CCB service	

## E DISCLOSURE OF INVENTION OUTSIDE BOEING

DISCLOSED TO: VENDOR CUSTOMER OTHER	NAME(S)	DATE(S)		
PUBLISHED YES <input type="checkbox"/> NO	PUBLICATION NAME	DATE	VOLUME NO.	PAGE

## F DEVELOPMENT HISTORY

1. WHAT BOEING ACCOUNT OR WORK ORDER WERE YOU CHARGING TO WHEN YOU MADE THIS INVENTION? None  
ACCOUNT OR WORK ORDER NO. FOR EACH INVENTOR (16-DIGIT CHARGELINE) 1) \_\_\_\_\_

2) \_\_\_\_\_ 3) \_\_\_\_\_ 4) \_\_\_\_\_

## 2. CHECK AS APPLICABLE:

THIS INVENTION WAS CONCEIVED OR FIRST BUILT AND TESTED IN THE COURSE OF WORK UNDER A U.S. GOVERNMENT CONTRACT.  
CONTRACT NO. OR OTHER IDENTIFICATION \_\_\_\_\_

X THIS INVENTION WAS NEITHER CONCEIVED NOR FIRST BUILT AND TESTED IN THE COURSE OF WORK UNDER A U.S. GOVERNMENT CONTRACT.

THE FOLLOWING ADDITIONAL PARTIES MAY HAVE RIGHTS TO THIS INVENTION: \_\_\_\_\_

3. RELATED INVENTION DISCLOSURE NOS: \_\_\_\_\_

## DO NOT WRITE BELOW THIS LINE

DISCLOSURE NO 01-402	DATE RECEIVED [REDACTED]	IPF RJA	Lead IPF	Tech Code EEG	IPA
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J Kiesen

**Invention Description:****1. Background:**

Traveler using portable computing devices, such as lap tops, have major problem operating these devices with any level of privacy due to the closeness of other travelers on most public conveyances. This means a businessperson reviewing company sensitive data in the middle of a row of seat on an airliner would face the possibility of at least two other users being able to read the data at the same time. The use of side screens to block any unwanted users view of the screen would be one solution but they are bulky, hard to setup, and restrict the operator's access to the device.

**2. Details of proposed concept**

The concept involved uses a combination of hardware and software to implement a commonly used color based masking system to allow only specific users to be able to read the contents of key business applications work files displayed on a color screen. The system is based around the property of color masking whereby text, which for this example will be written in dark Blue, is displayed against a bi-color irregular background.

The sample below shows how the text would appear under normal conditions

**Sample of normal text displayed against a typical white background**

In this case the background would consist of a mosaic pattern of alternating red and white diamonds whose form has been sized so that each diamond is about 25% the area of a typical text character. See the modified display below

**Sample of normal text displayed against a typical white background**

To the unaided eye the screen now appears as an illegible jumble with the red, blue, and white colored areas totally distorting the actual solid blue text present. This prevents casual and/direct examination of the data on the screen even under the most intense visual examination. However, if a user dons a set of red tinted glasses which have been designed to match the color of red shown on the screen, while viewing the display the real text now becomes visible for reading and/or manipulation.

To seamlessly allow this feature to be used on the fly a Visual basic module has been developed which loads itself onto the standard tool bar of all applications ins the standard Microsoft Office tool suite. Once loaded the software provides an additional pull down menu which offers the following new options:

1. Enable color masking
  - a. Set masking color
  - b. Set masking pattern
2. Disable color masking
3. Save data file in original format
4. Save data file and disable color masking
5. Print/Fax clean output
6. Uninstall color masking tool

The user accesses the pull down menu to start the system in any of the office application for an opened data file. The software save the current background setting for the file and then performs a block change to impose the blocking color mask using the color and/or patterns requested by the user. At this point the user dons the specific tinted glasses matched to this color shield and proceeds to work with the data file.

At any time that the user needs to save the data file to storage they can use the special save command. This blanks the screen, converts the file back to the original background, saves it to the disk, and then reset the color masks before re-displaying the screen for additional viewing/work. Once the user is finished with the file the second save command can be used which both saves the finale in the original background format as well as turns off the color-masking feature.

*Willa Koenig* 

*Thiesen* 

This same methodology is used if the user wishes to send a copy of the clean document to a local printer (or internal fax). Again, the software blanks the screen, converts the file back to the original background, sends the file to the printer/fax, and then reset the color masks before re-displaying the screen for additional viewing/work. *SECRET*

Once the user is finished with the file the second save command can be used which both saves the finale in the original background format as well as turns off the color-masking feature.

Special features of this system is the ability to use three different masking colors, Red, Yellow, & Blue to offer additional security if a nearby user is operating the same color masking system. The software is structured so that in case of system failure or software error the data file retains the original background.

The system consists of a software package which can be installed via diskette, CD, or download via modem or from the Internet. The system also includes a single lens frame with three interchangeable colored lens set that provides Red, Yellow, and Blue color mask decoding. Once activated the software searches for all Microsoft Office applications, as well as other programs to be determined latter, and installs itself as part of the basic tool bar of each program. The tool can also uninstall itself at the users option as part of its built-in capability

*Mark Thompson*

*J. Hrieser*